

Accuracy Characteristics for Final Delivery Cumulative Encounter Counts – Interfacility

1 Introduction

This document contains summary scenario characteristics for aircraft and airspace encounters for hours 1100 to 2100 GMT recorded on May 26, 1999 at Memphis ARTCC and cover either the ZME or ZID airspace. Characteristics provided are a total count of aircraft and airspace encounters partition by select horizontal separation intervals. Definitions of the scenario characteristics are provided in Reference[1].

Reference

[1] Paglione, M., Oaks, R., Ryan, Dr. H., Summerill, J.S., (Final, January 2000), *Description of Accuracy Scenarios for the Acceptance Testing of the User Request Evaluation Tool (URET) / Core Capability Limited Deployment (CCLD)*, FAA William J. Hughes Technical Center / ACT-250, Atlantic City, New Jersey.

2 Aircraft Encounter Distributions

The statistics collected in this section characterize aircraft to aircraft encounters. The encounter counts are partitioned by selected minimum horizontal separation intervals, with and without adherence for both current and trial plan rules. This section corresponds to Section 3.2.1 in Reference[1].

2.1 Count Partitioned by Minimum Horizontal Separation

This section corresponds to Section 3.2.1.1 in Reference[1].

Table 1: Total Count of Current Plan Aircraft Encounters

Minimum Horizontal Separation (nm)	Without Adherence	Adherence for at least 13 Minutes
$0 \leq d < 5$	927	598
$5 \leq d < 10$	1175	693
$10 \leq d < 15$	1460	851
$15 \leq d < 23$	2977	1764
$23 \leq d < 30$	2545	1527
Total	9084	5433

Table 2: Total Count of Trial Plan Aircraft Encounters

Minimum Horizontal Separation (nm)	Without Adherence	Adherence for at least 20 minutes
$0 \leq d < 5$	927	565
$5 \leq d < 10$	1175	664
$10 \leq d < 15$	1460	802
$15 \leq d < 24$	3369	1888
$24 \leq d < 30$	2153	1248
Total	9084	5167

3 Airspace Encounter Distributions

The statistics collected in this section characterize aircraft to airspace encounters. The encounter counts are partitioned by selected minimum horizontal separation intervals, with and without adherence for both current and trial plan rules. This section corresponds to Section 3.2.2 of Reference[1].

3.1 Count Partitioned by Minimum Horizontal Separation

The section corresponds to Section 3.2.2.1 of Reference[1].

Table 3: Total Count of Current Plan Airspace Encounters by Horizontal Separation

Minimum Horizontal Separation (nm)	Without Adherence	Adherence for at least 13 minutes
Conflicts ¹	13852	11883
$d = 0^2$	223	185
$0 < d < 7$	5055	4051
$7 \leq d < 9$	1354	1034
$9 \leq d < 11$	1218	925
$11 \leq d < 16$	3235	2556
$16 \leq d < 30$	11089	8754
Total	36026	29388

Table 4: Total Count of Trial Plan Airspace Encounters by Horizontal Separation

Minimum Horizontal Separation (nm)	Without Adherence	Adherence for at least 20 minutes
Conflicts ¹	13852	11628
$d = 0^2$	223	180
$0 < d < 8$	5760	4513
$8 \leq d < 11$	1867	1406
$11 \leq d < 13$	1183	902
$13 \leq d < 19$	4391	3469
$19 \leq d < 30$	8750	6640
Total	36026	28738

¹ This count includes encounters that are conflicts. By definition the minimum horizontal separation is zero and the track point actually penetrates the airspace.

² This count includes encounters without valid airspace penetrations, which occurs under two cases: a short duration penetration or an encounter on the actual buffered boundary of the airspace which does not penetrate.